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ABSTRACT

Scientific discoveries concerning the bimodal functioning of the human brain have influenced the creation of a visual literacy methodology program at Iowa State University for future art teachers. Student teachers plan and prepare visual lesson plans designed to reverse the traditional pedagogical reliance on faculties dominated by left hemisphere functions--verbal reasoning, logic, analysis--and to explore and promote skills operating in the right hemisphere of the brain--holistic comprehension, simultaneity, intuition, metaphor. Photographic materials assembled to make a well-formed visual statement are given to students, who are told that these materials are the instructions for their next art assignment. Students are faced with the problems of perceiving the general intent of the visual formation and of constructing a process approach for themselves in response. Mutal satisfaction between teacher and student that the response has been true to the student's unique perception while operating within the visual definition of the lesson plan, along with suggestions from the student that future visual statements may result from the exercise, are regarded as good indications of growth in right hemisphere thinking. (DS)

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# AN EDUCATION STRATEGY FOR THE RIGHT HEMISPHERE OF THE BRAIN

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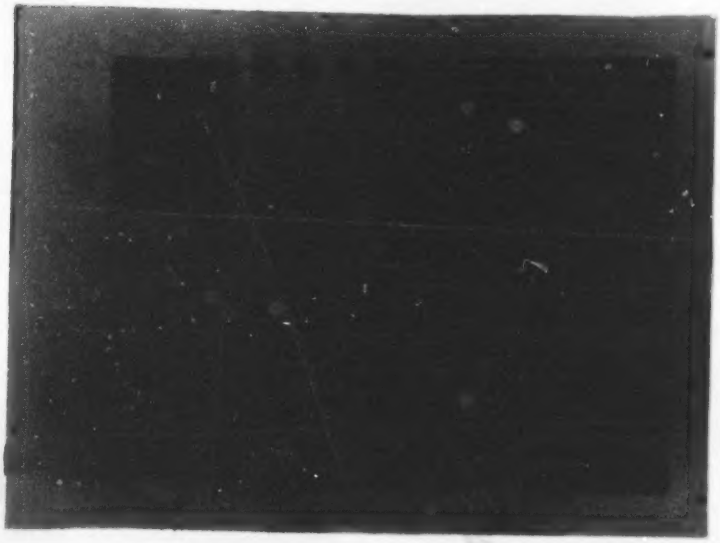
9th Annual Conference on Visual Literacy



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Art educators who teach in public school systems have available the visual expertise to aid in the establishment of workable visual literacy programs. There are, however, many blocks to be overcome before their extensive visual backgrounds can become available in focused service to the actualization of visual literacy.

Much of the education required for certification to teach art should in theory prepare a teacher of greater visual efficacy and sensitivity. While on the surface this would appear to be true, closer examination indicates that much in the art education process itself serves to separate the future teacher from his/her own unique perceptual processes, providing a formidable barrier to the establishment of soundly based visual literacy programs. If overly directive teaching methodology aimed at specialized art perception skills and curriculum based on codified media knowledge continue to be the norm in art teacher training programs, little relevance or assistance to the more generalized goal of visual literacy can be expected in practice within the public schools.

To this end a visual literacy methodology program has been developed for future art teachers at Iowa State University. An important part of this program is a project to construct a visual lesson plan, a technology compatible with high level visual thinking processes and sensitive to personal perceptual uniqueness. The necessity for this exercise is presented as the logical consequence of scientific discoveries concerning the bimodal functioning of the human brain.

THE HEMISPHERIC DOMINANCE THEORY BEHIND VISUAL LESSON PLANS

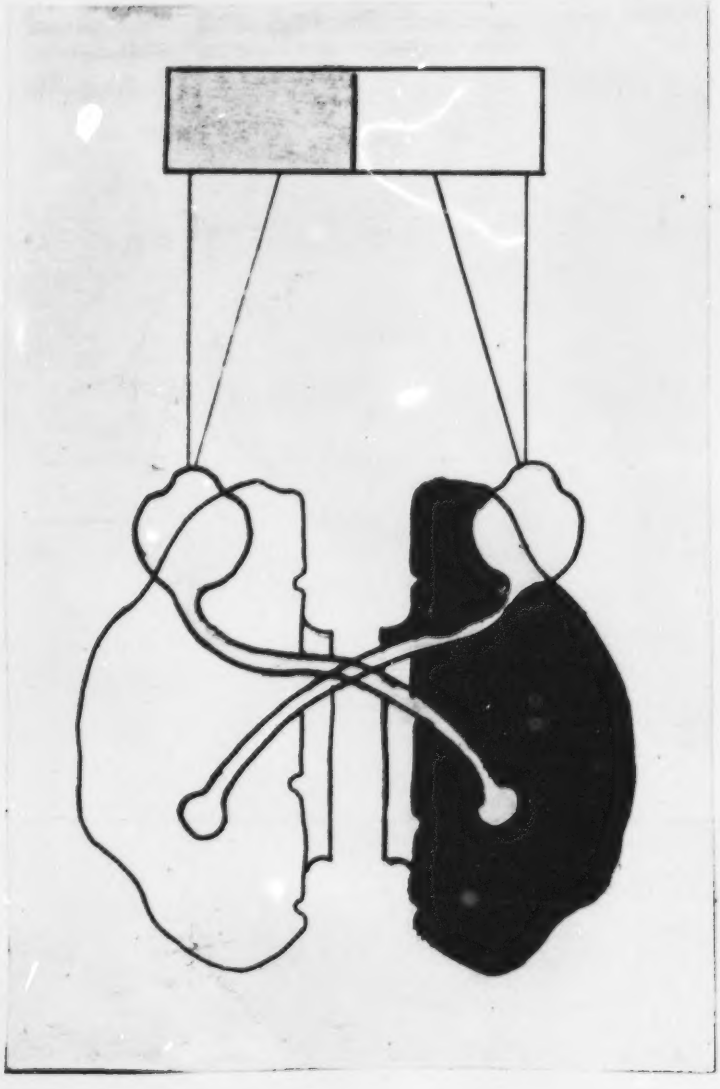
This theoretical structure aids the future teacher by suggesting a commonly shared set of assumptions and aspirations from which human communication can be built. It is hoped information thus shared about visual literacy will help the teachers participate in the more difficult, self-relative and continuing task of becoming more visually literate.

Published scientific research on hemispheric dominance by Sperry, Vogel, Bogen and others at the California Institute of Technology and California College of Medicine provides a challenging basis for future work in the area of visual literacy. By surgically severing the nerve connections, called the corpus collosum in the brains of epileptic patients, they made study of independent hemispheric functions possible for the first time.

Their findings show clearly that the two separated hemispheres function in quite different modes. The nature of these two modes is represented by the following chart:

| LEFT HEMISPHERE | RIGHT HEMISPHERE |
|---|---|
| Linear | Holistic |
| Sequential | Simultaneous |
| Rational | Intuitive |
| Logical | Metaphorical |
| Analytical | Synthetic |

Analytical examination of the nature of educational skills considered "basic" by our public schools indicates a strong societal bias toward left brain education. A visual lesson plan is designed to explore and promote a basic skill operating in the right hemisphere of the brain.



The following dichotomous taxonomy, suggested by hemispheric dominance research, is presented as a knowledge base to which students may refer as they proceed in actual exploration of right brain processes themselves.

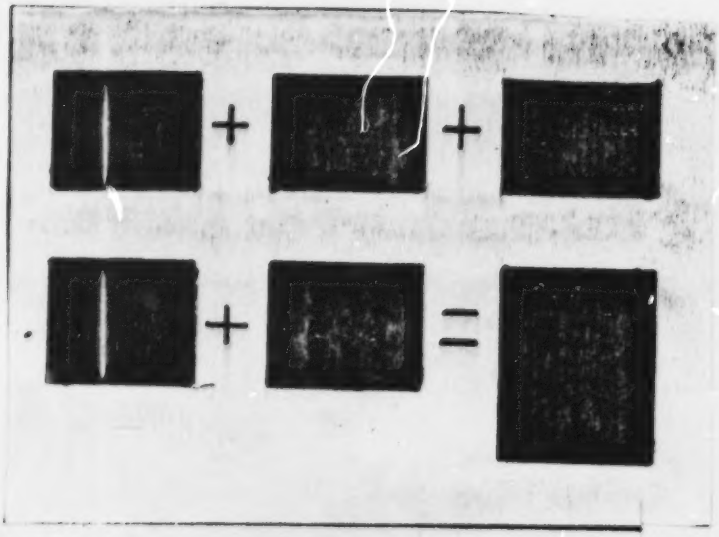
| LEFT | RIGHT |
|---|---|
| Verbal | Visual |
| Cognitive | Affective |
| Knowledge | Feeling |
| Scientific | Artistic |
| Mathematical | Aesthetic |
| Classic | Romantic |

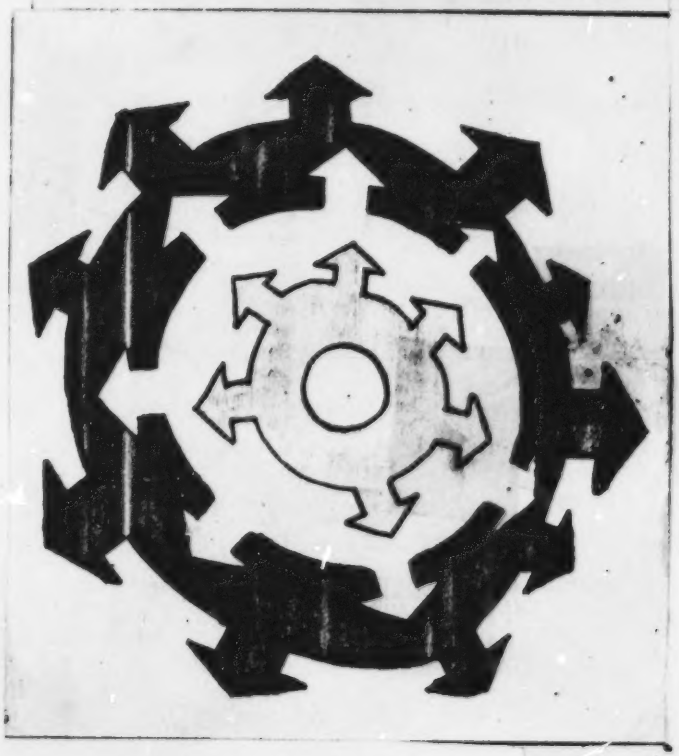
The existence of a language of visual wholes not totally amenable to verbal and sequential understanding is not a new experience to the future teachers. However, to reintegrate the use of both hemispheric functions, after years of left brain education and exposure to cultural biases reaching back to the classical roots of our civilization, is a formidable task.

The step by step, category by category functions of the left brain control and suppress the active functions of the right brain, which are pictured as growing outward in concentric rings of holistic growth. Visual lesson plans are designed to restress the importance of visually learning to rely on right brain processes based on an attachment to self.

VISUAL LESSON PLANS

Teacher education programs have traditionally trained their students to be well prepared by the construction of verbal lesson plans. From the foregoing theoretical structure, it should be apparent that these plans are for





the most part left-brained. Visual lesson plans reverse the traditional process and suggest that effective planning for schooling of the right hemisphere is also possible.

Technically visual lesson plans are arrangements of photographic materials with the appropriate visual symbols, overlays, diagrams, illustrations, and directions necessary to make a well formed statement to the students viewing them. Photographic materials used in the construction are taken from mass media periodicals because of the ease with which teachers can obtain those materials while teaching in the public schools. Students using them are then told that these visuals are the instructions for their next art assignment. Thus the student is faced with the problem of not only perceiving the general intent of the presented visual formation but of constructing a process approach for themselves based on what the perceived message suggests in relation to their lives and environment. This type of relational thinking places a responsibility on the student to enter into a learning mode which is synthetic, metaphorical, and holistic. Considering the left brained nature of our present school systems, this personal attachment problem is a very difficult one for many students. Artistic freedom is often seen as an absolute condition with no visual limits. The student must be therefore led to acceptance of the multiple personal choices open in the area specified by the visual lesson plan

To help future teachers understand the nature of right brain visual lessons, an analogy is drawn to the problem of

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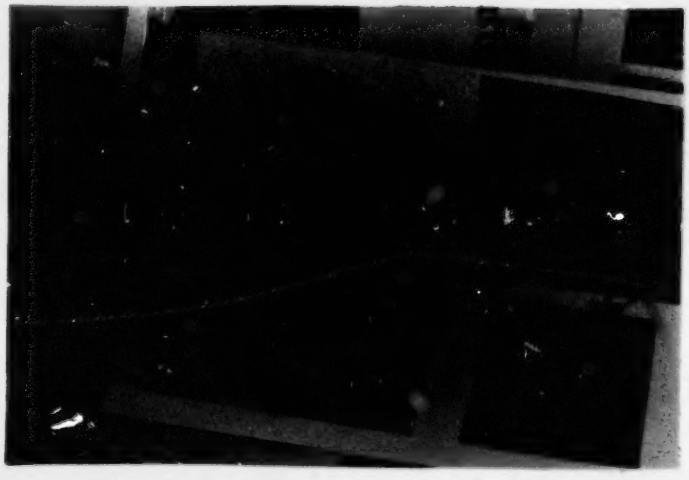
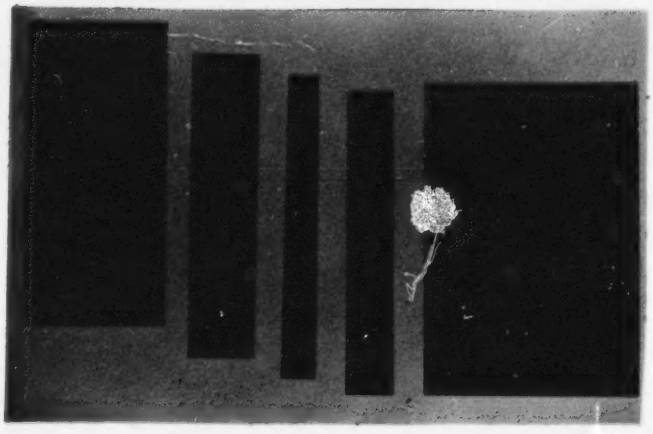


advertising a commercial product. In a visual lesson plan, the product is a visual phenomenon, process or quality.

The most effective visual lesson plan can be constructed when the visual subject is sufficiently narrowed in scope and controlled in quality of presentation. Since the assumption leading into this problem is that the future teachers are largely products of left brain school systems, preplanning, while highly left brained, is often quite reassuring. To accomplish this preparation in a class setting, a workbook of planning procedures is given each student. In this workbook the student is asked to identify his/her objectives in concept formation, student behavior, and subject related attitudes. Also the collected visuals must be slanted toward the interests if its intended school audience and visual variables which may distract the viewer from the intended message must be controlled. Emphasis is placed on planning and selecting with small thumbnail sketches and by moving and manipulating the photographic materials available. Many prefer to begin with the visual planning stage and only later think through their verbal objectives. After the Identify and Plan stages are complete, the student teacher completes the design, dry mounts and laminates the materials in their final form. The materials are then critiqued by the class to give the creator immediate feedback on their potential for use.

But usage is often an elusive goal in a left brain dependent culture. After years of schooling in producing concrete answers to specific questions, it is quite



understandable that future teachers often consider the exercise complete at this point and fail to connect intellectually and emotionally with the importance of usage. Principles of right brain functioning can best be seen in the process form they take in use and real difficulties often arrive in trying to put into practice the principles involved.

THE USE OF VISUAL LESSON PLANS

In using visual lesson plans, where knowledge is dispersed in rings rather than a linear progression, concepts concerning predictability and correctness of response must be confronted. To help teachers understand the effectiveness of their visual lesson plans, it is suggested a teacher use the Principle of Responsiveness. A visual lesson plan under this principle is effective if the student's process response demonstratably shows a substantially increased measure of interest, effort and personal involvement. This response must as well be clearly contained within the subject area suggested by the visual lesson plan. To understand and verify whether these criteria are met, both teacher and student enter into a series of interpersonal negotiations with the teacher using an inquiry approach as much as possible. Both parties must of necessity tolerate a great deal of planned ambiguity throughout the process of using the visual lesson plan but the stress in getting the student started is for a reasonably clear and communicable understanding upon which future growth may be built. A visually literate and confident teacher must determine if the tensions created in the student by the establishment of a visual goal have

helped the student add a right brain whole. Suggestions from the student that future visual statements may result from things learned in this exercise are regarded as a good indication that this has happened. The student in return must determine if his visual process response has been true to his own unique perception and has still operated freely within the visual definition of the lesson plan. If both parties are satisfied, right brain growth may be said to have taken place.

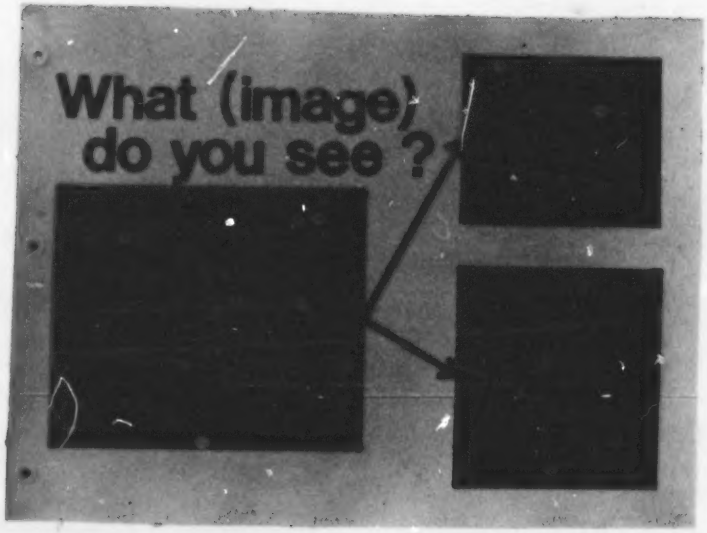
TESTING OF VISUAL LESSON PLANS

Many of the visual lesson plans have been used in public school classrooms. Because of the relativistic nature of right brain processes on which they are based, a strict empirical approach to testing was ruled out. Instead, photographic documentation of student art projects was considered for evidence of visual growth during the experimental use. Fluency and flexibility in products of the class as a whole were also considered. Under these conditions, we have concluded that visual lesson plans when correctly used within public school classrooms can stimulate a wide variety of high quality visual responses. Correct usage, in addition to the open inquiry approach mentioned earlier, may also include:

1 - Exposure to related supplementary visual material from books, reproductions, etc. on an individual need basis.

2 - Directive help with media related problems.

3 - Emotional support with emphasis on promoting a personally creative approach to exploration of the problem.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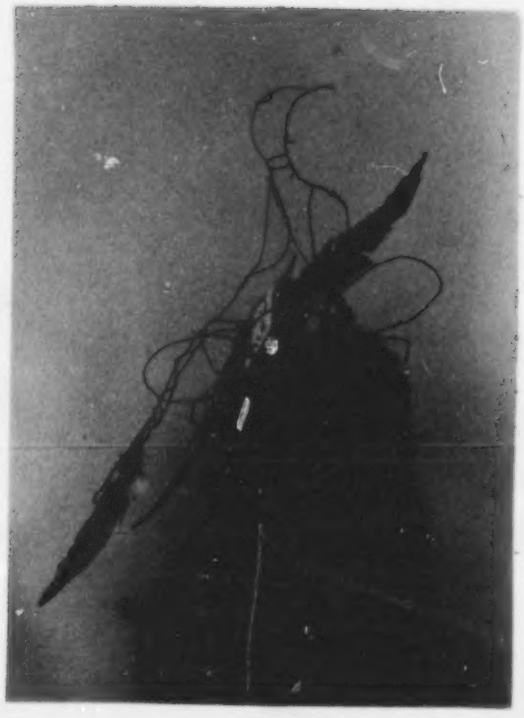
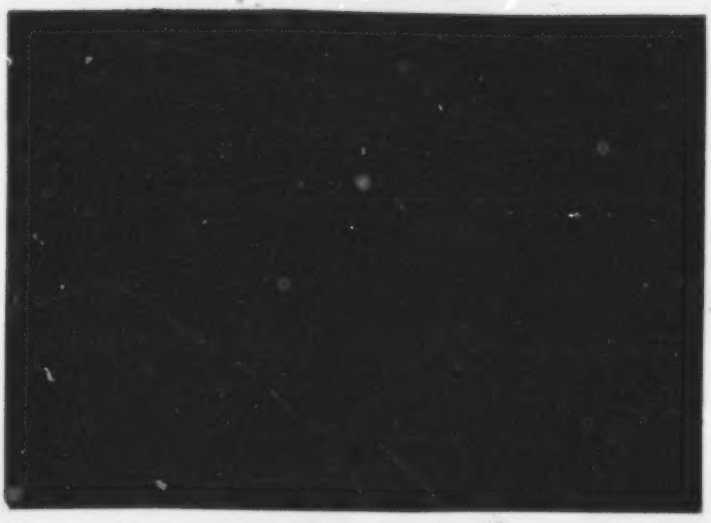
The use of visual lesson plans in an open inquiry atmosphere can by our best judgement help students considerably in resisting overwhelming visual pressures toward conformity caused by intensive exposure to mass media, group peer pressures, and the visual biases impressed by adults and the immediate living environment. Without left brained categories, the student is thrown back on the nature of his/her own unique visual perceptions and considerable growth in visual literacy can occur.

Not all reactions on exposure to visual lesson plans are positive. Often students deny the perception of any message in the plans no matter how obvious the meaning may be to the teacher. Even in this most negative of environments much can be learned about the visual learning situation in the classroom. Some common conclusions in our testing of materials include:

1. Many teachers use visual lesson plans inappropriately. Suggestions to students that there is only one convergent conclusion or giving in to the left brain urge to give the students a verbal label for the nature of the problem can defeat the purpose of visual lesson plans.
2. If the teacher creator is not highly visually literate, the visual lesson plan can be extremely confusing and threatening to all who view it.
3. Students often have attitudinal problems of long standing which make success extremely difficult, if not impossible. Years of experience with left brained school systems often makes the student prefer the quick and superficial answer to the





challenging and complex individual process. These students often fear new and flexible situations which do not fit the standard classroom patterns to which they are accustomed.

4. The students often lack the prerequisite visual literacy foundation to perceive a pattern within the presented visuals or to be sufficiently in touch with right brain processes to formulate the required process response.

Because correct usage is so vital to the effectiveness of visual lesson plans, there is a need for further testing under close supervision. The conventions for the construction and utilization of visual lesson plans need to be refined. Our testing indicates that knowledge of and experience with right brain processes can increase the potential visual responsiveness of future art teachers which they may then convey to their future students through the use of visual lesson plans. We will continue to suffer from the distorting effect of our long engrained left brain preferences until we make an experiential attempt to grasp the potential for right brained growth.